COMMODORE 128
PERSONAL COMPUTER

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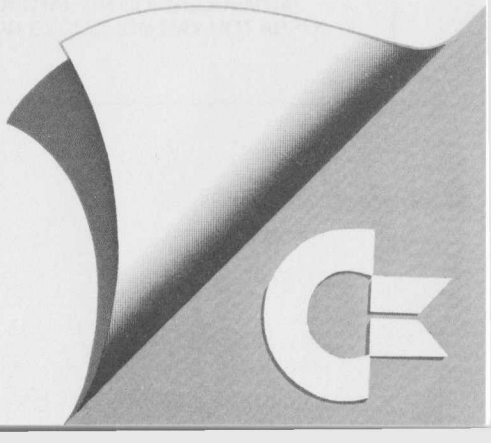
Micro Illustrator 128



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MICRO ILLUSTRATOR 128

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MICRO ILLUSTRATOR 128

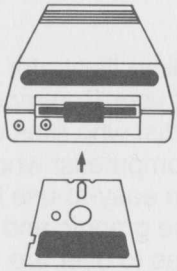
Micro Illustrator 128 unlocks the artistic potential of your Commodore 128 computer, giving the artist who likes using a computer or the computerist who enjoys experimenting with art an easy-to-use but powerful graphics tool. All the graphic and color capabilities that your C128 has to offer are at your fingertips with Micro Illustrator 128.

Your mouse or joystick acts as your brush, the keyboard becomes your palette and the screen is your canvas with Micro Illustrator 128. Art is art, whether it is carved in stone, formed from clay or fashioned on a monitor screen. Micro Illustrator 128's features let you perform almost limitless screen manipulation with joystick or mouse, all in the name of art.

LOADING INSTRUCTIONS

To set up a real canvas, you have to fix up an easel, make sure you have clean brushes, squeeze out and mix your paints . . . in short, it involves a lot of work. To use Micro Illustrator 128, once your Commodore 128 system (computer, screen, disk drive) is set up, you just follow these instructions:

1. Make sure your disk drive is plugged in and the serial cable is properly connected. Then turn the power ON.
2. Insert the disk into the disk drive. The label side of the disk must face up. Slide the disk into the drive opening so that the labeled end goes in last. Look for a little notch on the side of the disk (it might be covered with a sticker). This notch should be to your left as you put the disk into the drive, assuming you're facing your disk drive. Be sure the disk is in all the way.

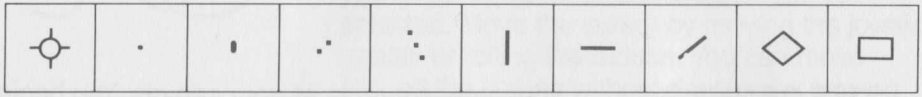


3. Close the door or handle over the disk drive opening after putting in the disk.
4. Type:
   DLOAD"*"
   and press the **RETURN** key. When the screen says **READY,** type:
   RUN and press **RETURN.**
5. After a brief wait, you'll be prompted to type a **B** if you want to use Micro Illustrator with a BASIC program (see BASIC language section of this manual), or to type any other key if you wish to go right into Micro Illustrator.
6. When the title screen appears, press the SPACE BAR. To use either joystick or mouse, plug the controller into port #2.

NOTE: You can use the keyboard instead of a joystick or mouse controller, by pressing the cursor keys to move the cursor on the screen, rather than moving the joystick handle or rolling the mouse. You can also use the C= key instead of the fire button. When this manual refers to the FIRE BUTTON in explaining the different commands, the C= key may be used instead.

The Micro Illustrator Main Menu

The menu is divided into three sections: COMMANDS, COLORS and BRUSH selections. Your joystick or mouse controls a cursor on the screen, which you use to select commands such as drawing or copying, the colors you want to use and the different sizes or textures of your brushstrokes. To select any option, just position the cursor in the appropriate area and press the FIRE BUTTON on your controller (or [C=]). To move from the menu to your canvas, press the SPACE BAR.



BRUSHSTROKE SELECTION

You can choose the shape or thickness of your cursor "brushstrokes" by moving the cursor along the strip of shapes on the center of your screen and pressing the FIRE BUTTON at the desired shape. Each of the 10 boxes contains a brushstroke of differing size, thickness, number or length. Your cursor assumes the shape you select, affecting everything you create on the screen.

Press a number key from 1 to 9 to select your brush speed (the speed that you can move the cursor around the screen with your joystick or mouse). The slowest speed (1) gives you the most precision and control. Press 0 for accelerating speed, which means that as you move the joystick in a given direction, the brush picks up speed. When using the keyboard, all the other keys and commands work as if you're using a joystick except for the accelerating cursor (0).

COLOR PALETTE

The strip of colors at the bottom of the screen is your color palette. Select your colors from this in the same fashion you chose brushstrokes. There are 16 colors available to you in the color palette, as well as patterns made up of each color and black. You can choose to use a pattern that is transparent (T, above the solid color on the color bar) or non-transparent (NT, below). If you select the transparent pattern, other shapes and colors can be seen where the black part of the pattern would be. The black part of the pattern is opaque when you use the non-transparent pattern.

THE CANVAS

Your screen serves as your canvas. You begin with a blank canvas and add colors, draw, etc. onto the blank screen. A blank canvas is a basic black screen. But you can change the colors of the screen background and border so your canvas can be any combination of colors. If you want to change the screen border color, press the * key. This changes the border color each time you press it. The UP ARROW key changes the screen background color in the same fashion.

Main Menu Commands

The top half of the menu is a grid of boxes, each containing a Micro Illustrator 128 command. You can switch back and forth between the menu and your canvas by pressing the SPACE BAR. Here are the commands that you can use on your canvas:

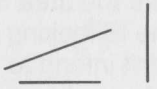
DRAW

Drawing is free-hand creation on the screen: when you hold down the FIRE BUTTON, moving the cursor produces whatever pattern or shape you follow in the color and brushstroke you selected. Move the cursor by moving the joystick handle or rolling the mouse. You can move around the screen without drawing by moving the cursor without holding the FIRE BUTTON.

POINT

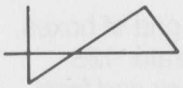
You can make points on the screen in the shape of the brushstroke and the color you selected. If you chose a brushstroke with two or three points, a single point comes out as two or three. Just position the cursor where you want to make a point and press the FIRE BUTTON.

LINE



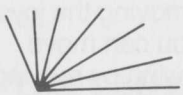
To draw a single line, press the FIRE BUTTON once where you want the line to begin and again where you want the line to end. The line stretches visibly in a "rubber band" effect as you move the cursor to set the endpoint. The line is produced in the brushstroke and color you selected when you press the FIRE BUTTON. If you decide that you don't want to complete a line that you've started, just press the SPACE BAR to cancel the starting point.

LINES



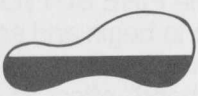
This command works like the LINE command, but is used to draw continuous lines. Press the FIRE BUTTON to set the starting point of a line, move the cursor to create the line, and press the FIRE BUTTON again to set the endpoint. The endpoint of that line then becomes the starting point of the next line. You can use this to create an unlimited number of connected lines. Press the SPACE BAR to release the line endpoint.

RAYS



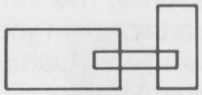
Rays are lines radiating from a single starting point. Press the FIRE BUTTON to set the initial point, and then move the cursor out to set the length (as you would draw a line) and press the FIRE BUTTON again to draw the single ray. Move the cursor to where you want another ray to extend from the starting point and press the FIRE BUTTON. You can do this as often as you like. If you don't release the FIRE BUTTON and move the cursor, you can draw a tight pattern of rays. The shape or denseness of the rays depends on the direction and speed at which you move the joystick. Press the SPACE BAR to erase the starting point.

FILL



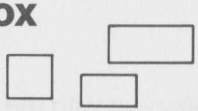
This command fills in an area of the screen with the current color. The area is defined by the position of the cursor. It colors in an area until it reaches another color. Make sure the area is completely enclosed to avoid the fill leaking into areas of the screen that you didn't intend to color. You can fill over areas that are already a solid color, but not over a pattern. You are able to draw over a filled pattern. You can mix a solid color and a pattern by filling an area with the solid color first, then fill in a transparent pattern over it.

FRAME



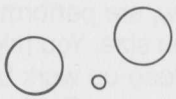
The frame command can be used to draw the outline of a box or rectangle. Press the FIRE BUTTON to select the starting point, and move the cursor to set the height and width of the box. The sides of the box are visibly shaped as you move the cursor. Press the FIRE BUTTON to produce the shape, or the SPACE BAR if you decide not to.

BOX



Box is identical to the frame command, except that it produces a solid box instead of an outline. The box is filled in the color you selected.

CIRCLE

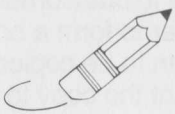


Use this command to create the outline of a circle. You set the center point when you press the FIRE BUTTON. Moving the cursor determines the size of the circle. The farther you move from the center point, the larger the circle. Press the FIRE BUTTON a second time to draw the circle.

DISC

Disc is identical to the circle command except that it produces a circle filled in with the current color.

ERASE

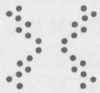


When you choose the erase command, you get two options:

- You can erase the whole picture.
- You can take out the last update to your picture.

When you select the first option, press the FIRE BUTTON and you immediately get a blank (black) canvas. The second option, instead of returning you to a blank screen, gives you a screen exactly as it was, but with your last command effects removed.

MIRROR



This command produces images of whatever you draw on the screen, as you draw. The screen is "divided" into four quarters when you use MIRROR; whatever you put in one quarter automatically appears in the other three. MIRROR is selected by pressing the FIRE BUTTON, and remains on until you go back to the command box on the main menu and press the FIRE BUTTON again. MIRROR is not useful by itself; it is usually used to modify another command, such as draw.

MAGNIFY

You can view your picture close-up with the MAGNIFY command. You can also use magnify for more precise control in drawing. MAGNIFY is turned on and off like the MIRROR command. Other operations, such as draw, are performed on a scale related to the screen size. You might find it helpful to inspect your close-up work by returning to the regular-sized canvas. Do this by returning to the command menu and selecting MAGNIFY with the FIRE BUTTON.

NOTE: You can also press X on the keyboard at any time to magnify or return to regular viewing of your screen.

COPY

You can reproduce what's in one area of your canvas into another area with this command. You "frame" the area or object you want copied by pressing the FIRE BUTTON in one corner, and again in the opposite corner to form a box containing the part of the screen to be copied. Then move to the area you want the copy to be and press the FIRE BUTTON, and the shape is reproduced. Be careful when you copy too close to the edge of the canvas, or some of your copy might end up being reproduced on the opposite edge of the screen. You can recopy a screen area as often as you want.

STORAGE

This command allows you to save a picture on disk, load a picture from disk or format a new disk to use for storage. Follow the screen directions when using STORAGE. You can use either the keyboard or your joystick or mouse to select these options (to store or load, etc.).

KEYSTROKE COMMANDS

Micro Illustrator 128 also features commands that can be activated or turned off with the touch of a certain key. Your C128 beeps to acknowledge each time a keystroke command is received. Listen for the beep to be sure the computer has accepted the keystroke. The keystrokes can only be issued when the picture is displayed on the monitor, and **not** during a menu screen.

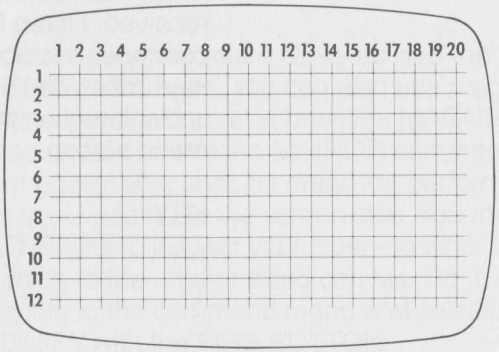
KEY	FUNCTION
P	Print picture
T	Type mode
C	Change all color
+	Swap to next screen
–	Swap to previous screen
D	Display all screens
SHIFT B	Return to BASIC

PRINT PICTURE

Micro Illustrator 128 pictures can be printed out using a Commodore MPS 801, MPS 803, or 1525 printer. The picture is printed out in black and white, with different dot patterns corresponding to different colors. When the P key is pressed, the picture currently displayed is printed out. If the MAGNIFY command is enlarging the picture, it still prints out in normal (non-magnified) form. If the printer does not begin printing, check to see that the printer is turned on and plugged into the serial port of the C128. You can interrupt a picture while it is printing out by pressing any key other than P.

TYPE MODE

You can include text in your Micro Illustrator picture by pressing T while the picture is displayed. The cursor changes from whatever brushstroke you've chosen to an upside-down 'L'-shaped text cursor. The letters in type mode are twice as large as normal text letters. This means that you can only fit 20 letters across the screen on 12 lines. The cursor is automatically positioned at the nearest available text position when you press T.

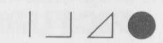


In text mode, you only have access to every other line. To get to an in-between line to enter text on, exit type mode, move the brushstroke cursor down a bit, and re-enter type mode.

There are four fonts available in type mode, and you select which one you want by pressing a function key. As usual, the activation of the keyboard command is signalled by a beep.

KEY	FONT	TYPE
F1	Normal letters, upper and lower case	**Text**
F2	Inverse normal letters, upper and lower case	**Text**

F3 Commodore graphic characters (corresponding to the graphic characters on the fronts of the keys; the key alone for the right character, the SHIFTed key for the symbol on the left front)



F4 Inverse graphic characters

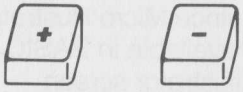
The cursor wraps around the screen in type mode, and moves down to the next text line. You can delete letters by using the INST/DEL key. The picture underneath is restored to how it was without the letter, unless you leave type mode and return to delete the writing (causing the memory of the picture without type to be released). If you delete where there was no text or the part of the picture is not in memory, that part of the picture is blanked out, so be careful when deleting text.

To exit type mode, press the FIRE BUTTON or the [C=] key.

COLOR CHANGE

When in FILL mode, you can change the color where the cursor is positioned on the picture with another color you've chosen from the color menu by pressing the C key instead of the FIRE BUTTON. The color is then replaced everywhere it appears on the screen.

SCREEN SWAP



Micro Illustrator 128 has six different screen "canvases" that you can draw on. Switch between the six screens by pressing the + and the − keys, + to move to the next screen and − to go back to the last one. Swapping screens allows you to display your creations in a sequence (for an effect simulating animation) and lets you work on multiple pictures at one time. Also, you can swap picture parts from one screen to another by using the COPY command with the + and − keys.

DISPLAY PICTURES

This function presents all the swap screens in a "slide show" fashion; that is, each screen is shown, then replaced with the next screen in a continuous display. You can set the speed at which the pictures are shown by pressing a number key from 0 to 9. 0 is the slowest, showing each screen for about 30 seconds, while 9 is the fastest, changing pictures almost instantly. To exit display mode, press any letter key until you hear the beep. You can reorder display screens by swapping ahead screens and using the UNDO LAST UPDATE option of the ERASE command from the Main Menu.

BASIC LANGUAGE

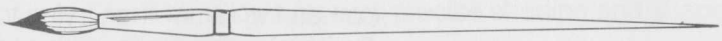
You can use Micro Illustrator 128 pictures in BASIC programs, or use graphics created in BASIC language in the Micro Illustrator program. After you've loaded the Micro Illustrator program, when you press **SHIFT** along with the **B** key, you find yourself in BASIC text mode with a flashing cursor under the word READY, with the picture that was displayed transferred to the multicolor graphic mode screen. You can write or recall your BASIC programs in this mode. To access your picture for display, type **GRAPHIC 3,0** and press **RETURN.** To include the picture as a part of a graphics program, use multicolor graphic mode without clearing the screen. Some colors of the picture may be lost, since Micro Illustrator uses more colors than are available in BASIC. The ability to use a Micro Illustrator screen with your BASIC programs can be very useful, as a screen enhancement or even a backdrop for sprites.

If you choose to enter BASIC before using Micro Illustrator (mentioned in step #5 of LOADING THE PROGRAM, page 2), whatever you do in BASIC (e.g. if you draw a design or a sprite) appears on the screen as your picture. You can then work on it as you would any other Micro Illustrator screen display.

If you wish to return to Micro Illustrator after entering BASIC, type the command

BANK 1:SYS 17152 and press **RETURN.**

It is advisable to exercise caution when re-entering Micro Illustrator from BASIC, since your BASIC program could possibly damage Micro Illustrator.



BRUSH TIPS

There are many things you'll pick up to make you a better Micro Illustrator 128 artist. You'll find many short cuts as you become more familiar with each command and how to use it.

Art often depends on experimentation; you should be willing to try anything when creating. Micro Illustrator has a couple of features that make experimentation easy, because if you make a mistake these features can give you a reprieve. Using the ERASE command, you can select the UNDO LAST UPDATE option. This returns your screen to exactly as it was before you tried your last manipulation. That means that the huge purple lizard you tried to insert into your recreation of Michelangelo's 'David' won't have to stay if you don't really like it. A second feature of Micro Illustrator is the capacity to save pictures using the STORAGE command. Saving is easy, and once a picture is saved, you can experiment to your heart's content secure in the knowledge that no matter how badly your screen manipulations turn out, you still have that original

picture safely tucked away. If you come up with a picture you consider improved, you can save the new picture over the old version using the same file name.

An instance where screen swapping is useful is in alternating screens. If you load the same screen onto two different displays, you're covered if you make a mistake. The UNDO LAST UPDATE of the ERASE command can undo any mistakes made when updating a picture. But by holding the same picture on more than one screen, you are assured of maintaining the original picture to return to if your changes don't work out. Also, you can compare variations in the closely related pictures, deciding what screen manipulations work best by actually comparing rather than trying to visualize. Combining this facility with swapping screens can allow you to duplicate a picture on another screen. From the picture you intend to copy, cycle forward to a blank screen. Then return to the Main Menu and select the ERASE function and UNDO LAST UPDATE. The picture now appears on the formerly blank screen.

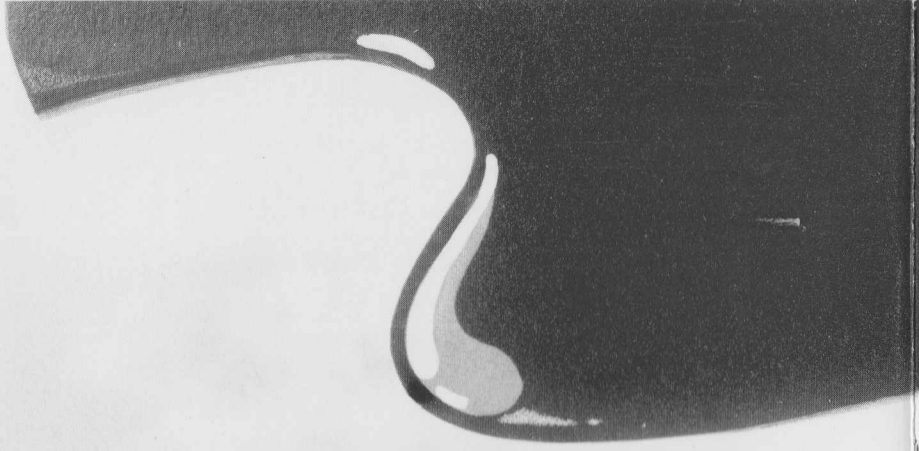
Commands such as COPY and MIRROR allow you to draw more than one item on the screen without having to completely redraw the item every time you want to use it. You can combine COPY with the keystroke swap screen function to cut and paste. This allows you to capture intricate parts of one picture with the COPY command of the Main Menu. Place them where you'd like on other drawing screens using the + and − keys to select the screen, and then copy that part on the new screen by pressing the FIRE BUTTON. You'll find this a powerful feature, which helps save time and effort as well as prevent errors and create effects such as simulating animation between screens.

To edit your pictures, you'll find that judicious use of the color palette can salvage lines that overlap or curves that don't quite curve where you want them to. Just select the color of the background and a brush size and speed that you can manuever with the precision you need, and touch up the offending area. If you want to get it perfect, you can use MAGNIFY and make sure you get the *exact* shape you want.

Another instance where the MAGNIFY command comes in handy is for more sophisticated shading in a picture. Magnified, the screen becomes divided into a grid 39 blocks wide and 25 blocks high. You have control over 32 sections (4 x 8) in each block. With this control, you can mix up to four colors in each of these blocks. This allows for very precise shading and shape resolution.

To make a pattern with two colors, first use the solid color in an area. Then select a transparent pattern from the color menu and fill over the solid-colored area. Where the black part of the pattern would be, the solid color shows through. This effect can be used to depict texture or even simulate motion.

Those are just a handful of tips for the Micro Illustrator artisan. As you experiment, you'll develop your own style and preferences, as well as a gallery of your own masterpieces. Create!



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